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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/113,770	07/10/1998	EDWARD G. TIEDEMANN JR.	QCPA577	8420

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EXAMINER
LIU, SHUWANG

ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 01/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/113,770	Applicant(s) TIEDEMANN, EDWARD G.	
	Examiner Shuwang Liu	Art Unit 2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *the amendement filed on 11/13/02* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2,5,8,9 and 12-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2,5,8,9 and 12-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 2, 5, 8, 9 and 12-16 have been considered but are moot in view of the new ground(s) of rejection because of the amendments.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 2, 5, 8, 9 and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramel (US 5,864,577) in view of Chen et al. (US 6,215,777).

As shown in figure 5, Ramel discloses an apparatus and a method for transmitting spread spectrum data, comprising:

(1) regarding claim 2:

a modulation and encoding circuit (4) for receiving data and modulating the received data (column 6, lines 3-column 7, line 2); and

an upconversion means (9) for receiving the modulated data and for upconverting the modulated data for transmission at a frequency determined in

accordance with a selection signal (output from 7), wherein the selection signal is determined in accordance with a subset of bits from the received data (F) (column 6, line 3-column 7, line 2).

(2) regarding claim 5:

a modulation and encoding circuit (4) for receiving data and modulating the received data (column 6, lines 3-61); and

an upconversion means (9) for receiving the modulated data and for upconverting the modulated data for transmission at a frequency determined in accordance with a selection signal, wherein the code channel-selection signal is determined in accordance with a subset of bits of the received data (F) (column 6, line 3-column 7, line 2).

(3) regarding claim 8:

a spread spectrum modulator (4) for receiving data and modulating the received data (column 6, lines 3-61); and

at least one upconverter (9) having an output, coupled to the spread spectrum modulator (4), the output of the upconverter having a carrier frequency that changes in accordance with a predetermined pattern, wherein the predetermined pattern is determined by a subset of bits from the spread spectrum data (column 6, line 3-column 7, line 9).

(4) regarding claim 9:

a spread spectrum modulator (4) for receiving data and modulating the received data (column 6, lines 3-61); and

at least one upconverter (9) having an output, coupled to the spread spectrum modulator, the output of the upconverter having a carrier frequency changing in accordance with a predetermined pattern, wherein the spread spectrum modulator modulates the spread spectrum data in accordance with a code channel selection signal that is determined in accordance with a subset of bits of the received data (column 6, line 3-column 7, line 9).

(5) regarding claim 12:

a modulation and encoding circuit (4) for receiving data and for modulating the received data in accordance with a code channel selection signal that is determined in accordance with a subset of bits of the received data (column 6, lines 3-61); and

an upconversion mean (9) for receiving the modulated data and for upconverting the modulated data for transmission at a frequency determined in accordance with a selection signal that is determined in accordance with a subset of bits from the received data (column 6, line 3-column 7, line 9).

(6) regarding claim 13:

modulating the data (4) (column 6, lines 3-61);

selecting a carrier frequency (8) in accordance with a subset of bits from the data (column 6, line 3-column 7, line 9); and

upconverting (9) the data using the selected carrier frequency.

(7) regarding claim 14:

modulating the data (4) in accordance with a code channel selection signal that is determined in accordance with a subset of bits of the data (column 6, lines 3-61); and

upconverting (9) the modulated data using a selected carrier frequency (column 6, line 3-column 7, line 9).

Ramel discloses all of the subject matter as described above except for specifically teaching the modulator (modulation and encoding circuit) (4) comprising a modulation means for modulating the received data and a scrambling means for scrambling the modulated data as recited in the respective amended claims.

Chen et al., in the same field of endeavor, teaches a modulator (for example, 57a in figure 1) comprising a modulation means (58a and 60a) for modulating the received data in accordance with a spread spectrum modulation format and a scrambling means (62a and 64a) for scrambling the modulated data (column 3, line 41-column 4, line 21 and column 7, lines 17-33).

In a CDMA transmitter, Walsh coded are used in forward links to separate users. and each forward code channel is assigned a distinct Walsh code. The scrambling means are used to scramble the modulated data in accordance with scrambling sequence provided by PN generators. It would have been obvious to one of ordinary skill in the art at the time of the invention to use a code channel modulator having the modulation means and the scrambling means as taught by Chen et al. in the modulation and encoding circuit of Ramel in order to improve channel security, reduce mutual interference, increase user capacity, and support path diversity to overcome fading while reducing the complexity of maintaining of efficient orthogonality between the packets and a high packet transmission rate.

4. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ramel and Chen et al. as applied to claims 13 and 14 above, further in view of Langberg et al. (US 5,852,630).

Ramel and Chen et al. disclose all of the subject matter as described above except for the method written by a software program embodied in a computer-readable medium as recited in claims 15 and 16.

However, Langberg et al. teaches that the method and apparatus for a transceiver warm start activation procedure with precoding can be implemented in software stored in a computer-readable medium. The computer-readable medium is an electronic, magnetic, optical, or other physical device or means that can be contain or store a computer program for use by or in connection with a computer-related system or method (column 3, lines 51-65). One skilled in the art would have clearly recognized that the method of Ramel and Chen et al. would have been implemented in software. The implemented software would perform same function of the hardware for less expense, adaptability, and flexibility. Therefore, it would have been obvious to write the software for the method of Ramel and Chen et al. embodied in a computer-readable medium as taught by Langberg et al. in order to reduce cost and improve the adaptability and flexibility of the communication system.

Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is (703) 308-9556.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin, can be reached at (703) 305-4714.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Shuwang Liu
Primary Examiner

January 8, 2003